University of Connecticut
School of Engineering

Office of the Dean

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FINANCE, REVENUE AND BONDING COMMITTEE

Testimony Submitted by Kazem Kazerounian, Interim Dean, UConn School of Engineering

S.B. No. 840 - An Act Concerning Next Generation Connecticut

Thank you for the opportunity to present testimony regarding S.B. No. 840 - An Act Concerning Next Generation Connecticut.

As Interim Dean of UConn's School of Engineering, and a professor of Mechanical Engineering since 1984, I have been fortunate to be a part of the University's nearly meteoric rise in quality, size and reputation. UConn 2000 and 21st Century richly fueled UConn's ascent by transforming the infrastructure of our campus, in the process providing state-of-the-art laboratory and classroom spaces that now enable our students to explore and master the technological knowledge, cutting-edge equipment and processes that will distinguish them in the workplace.

This infrastructure investment has also enabled UConn to grow its undergraduate populations, to attract top scholars from Connecticut and the nation, and to earn the respect of regional employers who now eagerly recruit our students for internships and full-time employment, ranking our graduates equal to those produced by the likes of Georgia Tech and the University of Michigan.

This is impressive progress. *Yet much work remains.*

According to the Winter 2013 issue of *The Connecticut Economy*, our state continues to suffer from poor job growth, with a decline of 1,800 jobs in the construction sector; 2,400 jobs in the transportation, trade and utilities sector; 1,300 jobs in professional and business sectors; and an exodus of 12,000 from the state labor force during the third quarter of 2012. Moreover, our workforce is aging, and it's very likely that as the mass of Baby Boomers retire over the next decade, our employers will have an enormous need for skilled engineers, scientists, technologists and mathematicians who can fill the ranks of the retiring while continuing to eke out growth.

Connecticut's economy remains stunted in part because the tech boom that will redefine and reshape our state depends on a well-educated, agile and large STEM workforce. Sustained investment in STEM education and training is critically needed if Connecticut is to regain its place as a fount of innovative technologies, a destination for high-tech manufacturing and a desirable settling place for our children on par with intellectually booming locales such as Silicon Valley and Cambridge, MA.

Next Generation Connecticut is the spark that will light up the state's economy with new technologies and companies, innovative thinking, a holistic intellectual vibrancy and high-wage STEM jobs.
Some pundits assert there is no shortage of engineers and scientists in the U.S. – that employers are, in fact, shipping jobs overseas to take advantage of lower-wage, skilled workers. While some companies have taken this route, the result is that wages – and worker demands – are rising in developing nations

like China and India. What this means is, countries that have offered inexpensive, well qualified labor and tax advantages to U.S. corporations are fast becoming more like the U.S. I foresee a day in the very near future when those companies will return to our shores and require a ready and agile workforce of skilled STEM workers.

I wish to further expand on this point. Over the last year, independent reports from the Boston Consulting Group , MIT, the Harvard School of Business and the Hackett Group, described new trends among American manufacturing companies who have major operations overseas. These studies show a clear and strong patern for these companies returning their operations to United States (also known as reshoring). From these companies, 37% with annual sales above $1 billion said they were planning or actively considering shifting production facilities from China to America. 48% of firms with sales above $10 billion, are considering to do so. The most common reason given was higher Chinese labor costs. The rate of this reverse migration is expected to double every two years. Examples are GE (production of washing machines) and John Deere. Where these returning companies choose to build their U.S. operations creates opportunity. While it is true that economic incentives will play a major role, the single most important factor is the availability of a large, well-educated and skilled tech workforce. This reverse migration by high tech companies presents Connecticut with an enormous opportunity, but only if we citizens, parents, employers and educators choose today to invest in the future of Connecticut and our children.

Further, I believe that by partnering with Connecticut businesses and industries, *Next Generation Connecticut* will enable UConn to better prepare its graduates for the genuine and often rigorous demands of the workplace today and in the future. Our children will enjoy greater opportunities for college internships and coops where they will become immersed in the industrial or business environment and acquire skills most needed by our state's employers. This symbiotic relationship will benefit employers as well, by enabling them to invest in and train STEM students throughout the undergraduate years and then to hire them as UConn graduates.

I foresee another facet of *Next Generation Connecticut's* enduring impact: the nurturing of entrepreneurs and innovators, from students to faculty, who will invent new products and services, launch new companies, and bring a new energy to our state in the years to come. This scenario is playing out now, on a scale that will explode with the infusion of greater numbers of exceptional STEM students enticed by Connecticut's promise and growing reputation. I believe an investment in our childrens' educations is an investment in our economic future and the responsible thing to do.

Thank you for the opportunity to present testimony on **S.B. No. 840 - An Act Concerning Next Generation Connecticut**, a bill I believe will spark Connecticut's high tech renaissance in the years to come. I urge you to vote affirmatively on this important bill.

Respectfully,

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